



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,373	10/28/2003	Ralf Beck	00655p1225US	5319
32116	7590	01/27/2006	EXAMINER	
WOOD, PHILLIPS, KATZ, CLARK & MORTIMER 500 W. MADISON STREET SUITE 3800 CHICAGO, IL 60661			WALTERS, JOHN DANIEL	
			ART UNIT	PAPER NUMBER
			3618	

DATE MAILED: 01/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding..

**Office Action Summary**

Application No.

10/695,373

Applicant(s)

BECK ET AL.

Examiner

John D. Walters

Art Unit

3618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 is/are allowed.
- 6) ☒ Claim(s) 5, 8 and 10-15 is/are rejected.
- 7) ☒ Claim(s) 6, 7 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

Claims 1 – 15 have been examined.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanemitsu et al. (5,123,695) in view of Murphy (4,485,531). Kanemitsu discloses a front body structure comprising:

- first and second heat exchangers (Fig. 4, items 24 A, 24B, and 51);
- connecting flanges (Fig. 4, items 28 and 52);
- a supporting frame (Fig. 5, item 6) having two vertical and two horizontal walls (Fig. 5);
- said walls containing at least one fastening opening which aligns with said flanges (Fig. 4);
- supports securable to support members on a vehicle (Fig. 4, item 22b);
- cross braces (Fig. 8, items 125 and 127);
- said cross braces being located between said heat exchangers (Fig. 8);
- connectors which connect said fastening openings, which include a head and stem (Fig. 4. item 53 & Fig. 5, item 29).

The connectors of Kanemitsu are standard bolt type fasteners. Murphy, however, discloses a stop pin comprising:

- an expandable end opposite a head (Fig. 1, item 8).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use the stop pin of Murphy within the front body structure of Kanemitsu in order to provide a quickly attachable, releasable fastening device with which to attach said heat exchangers.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanemitsu et al. (5,123,695) in view of Murphy (4,485,531) as applied to claim 5 above, and further in view of Sewell et al. (4,583,338). Kanemitsu in view of Murphy makes use of solid cross braces. Sewell, however, discloses a door panel construction comprising:

- a brace comprising spaced flat members and flat spacing members (Fig. 2, items 31 and 36).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use the brace construction of Sewell with the front body structure of Kanemitsu in view of Murphy in order to provide a brace which is reduced in weight while retaining a good level of structural strength.

Claims 10 – 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanemitsu et al. (5,123,695) in view of Murphy (4,485,531) as applied to claim 5 above,

and further in view of Heine (6,158,500). Kanemitsu in view of Murphy makes use of standard bolt type fasteners to secure components. Heine, however, discloses a heat exchanger arrangement comprising:

- support hooks and mounts which cooperate to secure components (column 3, lines 34 – 44);
- said hooks and mounts securing said components in the vertical direction (column 3, lines 34 – 44) which would be a non-parallel direction with the upper connectors (Fig. 1, items 5 – 8).

In regards to claim 12, Heine states (column 3, lines 34 – 44) that supplementary positioning webs are included near said hooks and mounts in order to provide a play-free holding of said components. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to exclude these supplementary positioning webs should said securing of said components require allowance for thermal expansion.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to combine the hook and mount attachment method of Heine with the front body structure of Kanemitsu in view of Murphy in order to provide a quick and efficient attachment method to be combined with releasable connectors.

Claims 13 – 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanemitsu et al. (5,123,695) in view of Murphy (4,485,531) and Heine (6,158,500) as applied to claims 5 and 10 – 12 above, and further in view of Tepas et al. (5,671,803).

Kanemitsu in view of Murphy and Heine does not include a fan shroud. Tepas, however, discloses a modular condenser and fans shroud assembly comprising:

- a fan shroud securable to said frame (Figs. 1 and 5);
- which includes an outer edge overlapping said frame walls (Fig. 1, item 44).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to include the fan shroud of Tepas in the front body structure of Kanemitsu in view of Murphy and Heine in order to allow the mounting of a fan which would increase the thermal capacity of said head exchangers.

#### ***Allowable Subject Matter***

Claims 6 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The outwardly bulging sections and inlet and outlet connectors being located therein as well as cross brace sections between the vertical wall sections above and below the bulging section, in combination with the other elements recited, are not found in the prior art of record.

Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The cross braces being oriented and used to direct the flow of air towards the corners of said supporting frame, in combination with the other elements recited, is not found in the prior art of record.

Claims 1 – 4 are allowed.

The following is an examiner's statement of reasons for allowance.

In the examiner's opinion, none of the prior art references, taken individually or collectively, teach or anticipate the following limitations found in the independent claim:

- said vertical walls outwardly extending to create bulging sections;
- said bulging sections receiving projecting components from at least one heat exchanger.

The prior art relating to heat exchangers, and more precisely heat exchanger frames, consists of generally rectangular frames to which heat exchangers are affixed, as shown in the above referenced art. The inlet and outlet projections are found going through the walls of the frame, as in Case (6,470,961), or exterior to said frame, as in Ozawa et al. (2002/0014322). The inclusion of the inlet and outlet projections from a heat exchanger within outward bulges formed by the frame walls is not found within the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Response to Arguments***

Applicant's arguments, see paragraph 2, filed 12/30/2005, with respect to 25 U.S.C. § 112 rejection of claims 5 – 12, 13 – 15, and 7 has been fully considered and are persuasive. The rejection of 9/28/2005 has been withdrawn.

Applicant's arguments filed 12/30/2005 in regards to the 35 U.S.C. § 103 rejection of claims 5 - 15 have been fully considered but they are not persuasive.

In regards to claims 5, 8, and 10 – 15, Applicant states, "...rejection proposes to modify Kanemitsu by substituting the "stop pin" of Murphy for the standard bolt type fasteners of Kanemitsu...the stop pin of Murphy is not disclosed as a "fastening device"...only being suitable "a stop to prevent longitudinal motion"... A standard definition of fastener, as evidenced by the Cambridge Dictionary Online, is a button or other device for joining together the separate parts of something. As shown in figure 4, Murphy clearly shows the "stop pin" joining the top horizontal surface (18) and the bottom horizontal surface (22). That the horizontal surfaces are also joined by vertical surfaces (20) does not remove the fact that the "stop pin" is also joining said horizontal surfaces.

Also, Applicant states, "...one skilled in the art...of automobile heat exchangers, and the associated vibrational and stress environment...would not look to a structure such as disclosed by Murphy..." While the material that would be optimal for use in the invention of Murphy may not be optimal for use in an automotive environment, it would



Art Unit: 3618

have been obvious to one of ordinary skill in the art to make use of a suitable material for its intended usage environment. Murphy states that the "stop pin" can be manufactured by a "stress resistant plastic material". There are suitable formulations of multiple plastic resins, ABS or nylon for example, that are suitable for use within an engine compartment.

For these reasons, the rejection stands.

In regards to claim 8, Applicant states, "...nothing is Sewell et al. that indicates...is suitable for use as a brace...door panel disclosed in Sewell et al. is not used as a brace to join to other structural elements...nothing in Sewell to indicate that a brace made according to its door panel construction would result in a reduction of weight..." The brace of Sewell teaches the use of a honeycomb type construction in a bracing structure. This would remove weight in comparison to a comparable solid structure while not lowering the rigidity at the same rate.

For this reason, the rejection stands.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

Art Unit: 3618

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to John D. Walters whose telephone number is (571) 272-8269. The examiner can normally be reached on Monday - Friday, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Ellis can be reached on (571) 272-6914. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John D. Walters  
Examiner  
Art Unit 3618

JDW  


 11/23/06  
PAUL N. DICKSON  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600